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## **A Mechanism Model of the Effect of Hedonic Product Consumption on Well-Being**

### **ABSTRACT**

In response to recent calls for research into activities that may increase happiness, this study uses longitudinal data to investigate changes in within-subject, instead of between-subject, well-being. In the context of hedonic product consumption, this study reveals a mechanism by which consumption influences well-being through the mediating effect of satisfaction with associated life domains. Four years of data from a large national panel survey show that consuming hedonic products has indirect effects on well-being, by improving consumers' satisfaction within relevant life domains. High hedonic consumption improves satisfaction with relevant life domains, primarily through more frequent consumption of low-cost hedonic products rather than less frequent consumption of high-cost hedonic products.

**Keywords:** Subjective well-being, Consumption, Hedonic products

## **A Mechanism Model of the Effect of Hedonic Product Consumption on Well-Being**

### INTRODUCTION

Subjective well-being (SWB, or happiness, as some researchers refer to it; see Lyubomirsky, King, & Diener, 2005; Lyubomirsky, Sheldon, & Schkade, 2005) benefits individual members as well as society as a whole. Enhancing people's well-being levels therefore constitutes a worthy goal (Lyubomirsky, King, et al., 2005; Lyubomirsky, Sheldon, et al., 2005), yet surprisingly, little scientific research considers what people might do to increase their well-being (e.g., Sheldon & Lyubomirsky, 2006). A key reason for this continued neglect may be the difficulty of conducting longitudinal studies that can examine within-subject effects; thus most previous studies adopt cross-sectional approaches and only examine between-subject effects (Lyubomirsky, Sheldon, et al., 2005).

Well-being predictors in existing literature can be categorized as: (1) genetically determined, (2) circumstantial, or (3) intentional positive behaviors and cognitions (Lyubomirsky, Sheldon, et al., 2005). Genetic factors, such as genes and personality traits, reportedly account for 40–55% of the variation in between-subject well-being, but they are very difficult, if not impossible, to alter (Diener, Suh, Lucas, & Smith, 1999). Circumstantial factors such as income, marital status, and employment account for only around 8–15% of the variance in well-being levels (Andrews & Withey, 1976; Diener et al., 1999), mainly due to the phenomenon of “hedonic adaptation,” by which people rapidly adapt to life circumstances by accepting relatively static and constant features (Lyubomirsky, Dickerhoof, Boehm, & Sheldon, 2008; Sheldon & Lyubomirsky, 2006). Therefore, positive behaviors and cognitions, which account for approximately 40% of the variance in well-being, offer the best potential

route to longitudinal increases in well-being since people have considerable control over these activities. Moreover, the hedonic adaptation effect is weaker for such behaviors and cognitions, because their episodic and varied nature directly counteracts adaptation (Lyubomirsky, Sheldon, et al., 2005; Sheldon & Lyubomirsky, 2006).

Hedonic product usage appear positively associated with consumers' well-being (Scitovsky, 1976, 1986; Oropesa, 1995), and experiential purchases (i.e., to acquire life experiences) make people happier than material purchases (i.e., to acquire material possessions) (e.g., Boven, 2005). Conceptually however, this improvement is subject to some debate, in that as the human race grows richer, the problems associated with greater consumption, and hedonic consumption in particular, can result in negative effects on consumers' overall well-being. For example, increasing leisure consumption may help to cause ill health from excessive drinking, psychological disturbances from certain kinds of overstimulation, or spiritual malaise from excessive attention to indulgent products (Goodwin, Nelson, Ackerman, & Weisskopf, 2007). Methodologically, these cross-sectional studies cannot track subsamples longitudinally, which prevents any examination of the dynamics of SWB or consumption and ignores within-subjects effects (Marks & Fleming, 1999). Thus answer to the question—does spending money on hedonic products increase well-being?—thus remains unclear.

If there is an effect, the second question that arises pertains to why might spending on hedonic products or services increase consumers' well-being? Efforts to identify potential psychological mechanisms that may mediate the effects of consumption on well-being or critical mediators that underlie the effectiveness of happiness-enhancing activities remain at

an early stage (Lyubomirsky & Dickerhoof, in press). One possible mechanism is by consistently improving the quality of relevant life domains and satisfaction with those life domains (e.g., leisure life, social life, health). In other words, people's satisfaction with life domains potentially mediates the relationship between consumption and well-being.

If spending money on hedonic products increases subjective well-being and we know how, the practical question arises of how much and in what way should consumers spend on hedonic products to increase their well-being? For example, if a consumer has £100 in disposable income, should he or she spend it all on one great, expensive leisure activity or on 10 less exciting and less expensive activities? Unfortunately, no research has hitherto quantified how much consumers need to spend to achieve improved well-being.

This paper addresses these three key research questions. In the following sections, we offer an overview of our hypotheses pertaining to SWB and consumption behavior toward hedonic products, then test these hypotheses with fixed-effects econometrics models, using data from a large national panel survey. Finally, we discuss the theoretical and managerial implications of our findings, as well as some limitations and avenues for further research.

## RELATIONSHIP BETWEEN HEDONIC CONSUMPTION AND SWB

Before we discuss this relationship, we define hedonic products and SWB. Hedonic products are those “whose consumption is primarily characterized by an affective and sensory experience of aesthetic or sensual pleasure, fantasy, and fun” (Dhar & Wertenbroch, 2000, p. 61) and that primarily provide experiential enjoyment, consumption, fun, pleasure, and excitement (Okada, 2005). In turn, we define hedonic product consumption as a consumer's usual or regular expenditures on specific hedonic products or services during a given period

(e.g., in a month). It reflects how much of the hedonic experience the consumer enjoys regularly. For example, leisure, the focus of the present research, is a typical hedonic product that consists of “activities that people do simply because they want to, for their own sake, for fun, entertainment, self-improvement or for goals of their own choosing, but not for material gain” (Argyle, 1992, p. 104). Therefore, leisure consumption is a subset of hedonic consumption, which is a consumer’s regular expenditures on various leisure activities (per month).

SWB is defined as how much a person experiences positive affect compared to negative affect during a particular period of life (Bradburn 1969; Diener 1984).. In contrast with momentary or daily happiness, SWB is relatively stable and enduring, though still malleable, which makes it more meaningful for people to pursue (Lyubomirsky, Sheldon, et al., 2005).

Existing theories and perspectives regarding the relationship between consumption and well-being offer mainly inconsistent findings. For example, demand theory proposes that consumers seek to maximize their satisfaction through economic activities that consist of the exchange and consumption of goods (Suranyi-Unger, 1981). The market-centric perspective also posits that consumers enhance their well-being by recognizing their own needs and satisfying them by engaging in consumption activity and attaining consumer products (Samli, Sirgy, & Meadow, 1987). Duesenberry’s consumption emulation theory (Douthitt, Macdonald, & Mullins, 1992; also see social comparison theory by Festinger, 1954) suggests that people derive satisfaction from emulating their neighbors’ or reference group’s consumption behavior. Consumption, especially of hedonic consumer products, is highly important for happiness among modern consumers (Burroughs & Rindfleisch, 2002; Scitovsky, 1976, 1986), such that

highly developed economies tend to exhibit an increased emphasis on hedonic consumption. Thus, consumption as a mass phenomenon appears necessary for “the good life” in modern consumer society (Schor, 1999). The possession and consumption of more hedonic products also represents the “principal cultural aspiration and the surest perceived route to personal happiness” and well-being (Ekins, 1991, p. 244). These arguments generally indicate that the regular consumption of hedonic products, as motivated by the pursuit of hedonic, pleasurable experiences and happiness in the marketplace, leads to greater well-being. This perspective is consistent with SWB bottom-up theories, which view well-being as the sum of many positive and enjoyable experiences (Brief, Butcher, George, & Link, 1993; Diener, 1984; Lyubomirsky et al., 2008).

In contrast, other behavioral research suggests that consumption leads to detrimental outcomes. For example, the Diderot effect, “a force that encourages the individual to maintain a cultural consistency in his/her complement of consumer goods” (McCracken, 1988, p. 123), suggests that even impulsive consumption may cause a consumer to start to look forward to greater and greater consumption levels, until that consumption eventually “imprison[s] him and frustrate[s] his efforts to redefine himself,” which “prohibits the attainment of consumer satisfaction” (McCracken, 1988, p. 128). The constant generation of needs even may cause people to become strapped for cash, with greater financial insecurity and consumer debt (Schor, 1999). With regard to the latter issue, materialism literature indicates that when people devote too much attention to consumption and acquisition, such that these efforts represent the central goals of their lives, they suffer negative well-being effects (Burroughs & Rindfleisch, 2002; Richins & Dawson, 1992). Finally, there is the notion of the hedonic

treadmill (Brickman & Campbell, 1971) that suggests that adaptation to happiness is complete and unavoidable and therefore to consume more may make you happier in the short-term but has no long-term effect. In short, there can be such a thing as too much consumption (Goodwin et al., 2007), which leads to low well-being. National survey evidence from the United States, European countries, and Japan shows that unprecedented economic growth and more consumption do not relate to more happiness or higher well-being (Blanchflower & Oswald, 2004; Esterline, 1995; Goodwin et al., 2007). This discussion therefore requires that we empirically test the hypothesis that consumption leads to increased well-being to determine which side of the argument has the most support. Therefore,

Hypothesis 1: Consumption of hedonic products leads to increased subjective well-being.

But what causes such divergent views about the relationship between consumption and well-being? We argue that the conflicting perspectives and arguments result from the ignorance of two critical assumptions that underlie the relationship between consumption and well-being. First, a consumer's subjective interpretation of his or her objective circumstances represents a crucial determinant in a relationship—that is, it is not consumption that leads to well-being but rather how satisfied the consumer is with that consumption. Second, the type of consumption (e.g., regular, frequent consumption of (low-cost) hedonic products versus occasional consumption of (high-cost) hedonic products) likely plays a role. Is it the quantity or quality of consumption that drives well-being? In the following section, we integrate these two assumptions into the relationship between hedonic product consumption and well-being to establish our research hypotheses.



## **Relationship between Consumption of Hedonic Products and SWB; Mediating Role of Satisfaction with Relevant Life Domains**

Although the characteristics of hedonic products are associated with pleasure/fun and can elicit positive affect (Hirschman & Holbrook 1982), their consumption experiences do not necessarily lead to increased well-being (Shmotkin, 2005), because consumers' subjective interpretation of consumption across numerous occasions represents the key determinant of overall well-being. This perspective receives support from top-down theories of SWB that assume that people are predisposed to experience and interpret objective circumstances in either positive or negative ways (Brief et al., 1993; Lyubomirsky & Dickerhoof, in press). In turn, satisfaction with circumstances across various life domains (e.g., finances, health, friendships, family relations, leisure, education) relates strongly to SWB (Lyubomirsky, King, et al., 2005; Lyubomirsky & Dickerhoof, in press; Lyubomirsky, Tkach, & Dimatteo, 2006).

The preceding arguments suggest that objective consumption behavior may be a weak predictor of well-being (Durning, 1992), such that the effect of the consumption of hedonic products on well-being may be mediated by the consumer's interpretation of the relevant situations or life domains of which that consumption is part. A life domain is "an aspect of life about which people have feelings" (Andrews & Withey, 1976, p. 11), which has significance for most people and may be assumed to contribute to general life satisfaction (e.g., leisure life, social life, health) to at least some degree (Campbell, Converse, & Rodgers, 1976). We therefore introduce a mechanism by which hedonic expenditures might lead to sustained increases in well-being due to a "spillover" effect. Take leisure consumption as an example: Consumers spend money on leisure activities, such as going out for a drink or

attending live sporting events with friends, not only for the inherently pleasurable experiences that these activities produce but also to build and maintain friendships and social connections, which then serve to improve the quality of their social and leisure lives. The more they spend on and the more frequently they engage in these activities, the more they improve the quality of these life domains, which makes them satisfied with the domains, which then makes the consumers happier. Similarly, people may spend money on other leisure activities, such as playing team sports or attending evening classes, not only to enjoy their leisure time but also to build up their physical health and social connections. Thus, it is not just the consumption that increases well-being but rather how this consumption leads to satisfaction with relevant life domains and the spillover effect into other life domains. Therefore, more consumption should lead to greater satisfaction in certain life domains, and greater satisfaction should increase well-being. On the basis of the preceding arguments, we hypothesize:

Hypothesis 2: Hedonic product consumption relates positively to well-being indirectly through the mediating effect of satisfaction with the life domains associated with that consumption.

### **Relationship among Frequency of Consumption, Cost of Hedonic Products, and SWB**

In H2, we argue that consuming hedonic products contributes to well-being by improving the quality of the life domains associated with the consumption and advancing consumers' satisfaction with those life domains, which lead to well-being. Following from these explanations of the link between expenditures on hedonic products and SWB, we also argue that regular and frequent consumption of low-cost hedonic products may be a more fruitful way of increasing SWB than are large expenditures on a few items.

First, we know that that the marginal value of positive events generally decreases with their magnitude (Kahneman & Tversky, 1979). This implies that each extra unit of positive events adds less value or pleasure than the preceding one (Linville & Fischer, 1991). For example, the pleasure a consumer derives from spending £100 on leisure is less than 10 times of the pleasure he or she derives from spending £10 on leisure. According to Linville and Fischer (1991), people possess limited resources for savoring a positive event, which may involve cognitive processes such as cognitively elaborating the event and its implications for one's goals and savoring the emotional high that is related to the event and thus requires time and considerable cognitive resources. The larger the event, the greater a person's "gain-savoring resources" it requires to consume to appreciate the event. However, this "gain-savoring resources" are depleted when used, but are renewable or replenished naturally over time (Linville & Fischer, 1991, p. 10). This implies that there may only be sufficient "gain-savoring resources" to fully appreciate a small event, but not a large one during a certain period (e.g., a day), while the "gain-savoring resources" will be renewed to fully appreciate another small event maybe the next day, and so on. That is, the positive impact of a large event may be under-appreciated, but that of a small one will be fully appreciated.

Second, physiological mood-enhancing effects, such as serotonin and endorphins, of hedonic experiences are short-lived. Therefore, a consumer might get a slightly bigger endorphin high from a large hedonic experience, but the effect dissipates quickly. However, he or she could derive and maintain a greater cumulative well-being from frequent "small doses" of hedonic experience.

Third, the promise of pleasure in hedonic consumption (e.g., exercise, entertainment, or

socialization) forms a powerful and ongoing motivation for consumers to re-experience pleasurable feelings again (Hagtvedt & Patrick, 2009). Therefore, there is an emotion-laden relationship (e.g., attachment) between consumers and hedonic product consumption, which influences consumers' behavioral reactions such as the allocation of emotional and behavioral resources towards this type of consumption. It is evidenced by such outcomes as "proximity seeking behavior, separation distress, a sense that the attachment object offers a safe haven, and mourning of its loss" (Fedorikhin, Park, & Thomson, 2008, p. 282). Therefore, there is an inbuilt reward to undertake hedonic consumption frequently. If a consumer spends £100 on one hedonic event, the ongoing need goes unfulfilled for a subsequent period of time and the consumer would be distressed by the "separation". Therefore, increased well-being should be more closely associated with frequently consuming (and thus by consequence, relatively low-cost) hedonic products.

Fourth, it is argued that consumer behavior often serves individualistic needs and/or bolstering a specific type of self-belief such as the dimension of agency (e.g., uniqueness, status, power) or the dimension of communion (e.g., social harmony, affiliation) (Sedikides, Gregg, Cisek, & Hart, 2007). Correlational evidence suggests that the former is related to the purchase of the expensive and/or exclusive high-prestige products that may run the risk of sacrificing necessities or run up consumers' credit bill (Sedikides et al., 2007). Therefore, ongoing smaller (and thus less expensive) consumption behaviors (e.g., consumption on socializing with friends) are more closely associated with well-being. Indeed, improving the quality of life in such domains as building physical health and strong social connections or achieving personal growth, represents a long-term accumulative process that requires the

consumer to make frequent efforts. By their very nature, these benefits do not result from a one-off or even several hedonic consumption events. This line of argument also derives from evidence that implies hedonistic behaviors or indulgent pleasures are not highly correlated with happiness (Diener & Biswas-Diener, 2008; Shmotkin, 2005). Instead, happy people tend to prefer low-cost, everyday pleasures, such as socializing with friends (Csikszentmihalyi, 1990). On the basis of these arguments, we propose:

Hypothesis 3: Satisfaction with life domains positively correlates with increased frequency of involvement in the consumption of hedonic products.

## RESEARCH METHOD

### **Sample and Data**

The data for our study come from the British Household Panel Survey (BHPS), an annual survey designed to “further understand social and economic change at the individual and household level in Britain, and to identify, model and forecast such changes, their causes and consequences in relation to a range of socio-economic variables” (Taylor et al., 2001, p. A2-1). The initial selection of households for inclusion in the panel survey depends on a two-stage, stratified, systematic method. The frame used to select sample units employs the small users Postcode Address File (PAF) for Great Britain. The first stage selects 250 postcodes from an implicitly stratified listing of all sectors in the PAF, using a systematic sampling method. The stratified population of addresses provides an ordered listing by region and three socio-demographic variables. Pursuing interviews with all resident household members aged 16 years or older produced a nationally representative sample of more than 5,000 households, including a total of approximately 10,000 individual interviews.

The data collection for BHPS uses face-to-face interviews, telephone interviews, and self-completed surveys. The response rates vary by survey type, from 85% to 91%. Proxy interviews were available for all eligible members of the household who could not be interviewed because of illness or absence. In such cases, the proxy interview took place over the telephone or involved a mailed letter for those without a phone number, followed by a visit from an interviewer. The data from BHPS include waves 8, 10, 12, and 14, published in 2000, 2002, 2004, and 2006, respectively, and thus contain more than 25,000 observations.

## **Variables**

Dependent variable: SWB

The BHPS data measure SWB according to the ordered ranking of the responses to the GHQ12 item (Goldberg, 1972). This scale consists of a 12-item measure that assesses positive and negative affect on the basis of people's responses to 12 questions: "Have you recently, 1) been able to concentrate on whatever you're doing, 2) felt you were playing a useful part in things, 3) felt capable of making decisions about things, 4) been able to enjoy your normal day-to-day activities, 5) been able to face up to problems, 6) been feeling reasonably happy, all things considered [positive affect] or 7) lost much sleep over worry, 8) felt constantly under strain, 9) felt you could not overcome your difficulties, 10) been feeling unhappy or depressed, 11) been losing confidence in yourself, 12) been thinking of yourself as a worthless person [negative affect]?" The 12 items are anchored on a four-point response scale, ranging from "1 = More so than usual" to "4 = Much less than usual" for positive affect and from "1 = Not at all" to "4 = Much more than usual" for negative affect. These questions consist of statements about both behavioral and psychological functioning and reflect the enduring

positive and negative affect aspects of SWB, such as the average mood level or the frequency of positive and negative affect in a specific period of time (Eid & Diener, 2004). In common with most existing well-being studies, we use the inverse of the caseness score form of the GHQ12, which sums binary values to the responses from each question, resulting in a score range from 0 to 12, on which higher numbers indicate higher levels of well-being (Clark, 2003; Shields & Price, 2005).

#### Independent variables

We test our model using a leisure consumption variable, because as an important subset of hedonic consumption, it has reached its highest rate in the past four decades in the United Kingdom, the setting for this study (Porritt, 2003). It represents an important consumption behavior in modern life. Consistent with our definition of leisure consumption as a consumer's regular expenditure on leisure, we measure it as consumers' monthly expenditures on leisure activities, entertainment, and hobbies. The BHPS question pertains to consumption on leisure activities, entertainment, and hobbies by asking, "how much do you personally spend in an average month on leisure activities, and entertainment and hobbies, other than eating out?" The variable is ordinal in nature, with scores labeled 0 = nothing; 1 = under £10; 2 = £10–£19; 3 = £20–£29; 4 = £30–£39; 5 = £40–£49; 6 = £50–£59; 7 = £60–£79; 8 = £80–£99; 9 = £100–£119; 10 = £120–£139; 11 = £140–£159; and 12 = £160 or more.

The life domains associated with leisure consumption include the use of leisure time, social life, and health. In the BHPS, the questions about satisfaction with three life domains are as follows: "How dissatisfied or satisfied are you with [Your social life /The way you spend your leisure time /Your health?]" These domain-specific satisfaction scores all use

single-item, seven-point Likert-type scales, ranging from “1 = not satisfied at all” to “7 = completely satisfied.” This well-validated measure frequently serves to measure domain satisfaction in previous research (e.g., Leelakulthanit, Day, & Walters, 1991; Lyubomirsky, et al., 2006).

To measure the frequency of engaging in leisure activities, we use six items: walk/swim/play sports, watch live sports, go to the cinema, go to the theater/concert, go out for a drink, and attend evening classes. The BHPS question about frequency of engaging in leisure activities is: “We are interested in the things people do in their leisure time. I’m going to read a list of some leisure activities. Please look at the card (V4) and tell me how frequently you do each one: 1) Play sports or go walking or swimming; 2) Go to watch live sports; 3) Go to the cinema; 4) Go to a concert, theatre, or other live performance; 5) Go out for a drink at a pub or club; 6) Attend leisure activity groups such as evening classes, keep fit, yoga, etc.” All responses to these questions use five-point Likert-type scales, on which 1= At least once a week; 2 = At least once a month; 3 = Several times a year; 4 = Once a year or less; and 5 = Never/almost never. We reverse the scale of each response and recode it as 0 (never/almost never) to 4 (at least once a week). The frequency of engaging in leisure activities equals the sum of the recoded responses to each related question, for a score range from 0 to 23.

Finally, the control variables include gender, age, age<sup>2</sup>, income,<sup>1</sup> marital status, number of children and preschool children, education, vocational qualification, job status and

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<sup>1</sup> Our measure of income is the log equivalent of household income, the most commonly used measure at the international level (see Graham, Eggers, & Sukhtankar, 2004).



partner's job status, household size, property ownership, and region. These explanatory variables similarly appear in existing literature on well-being and consumption (Oropesa, 1995; Shields & Price, 2005).

### **Data Analysis**

To determine the causal direction by which A causes B, we must show that A precedes B (i.e., changes in A precede changes in B) (Headey, Veenhoven, & Wearing, 1991)—the greatest difficulty for SWB research, especially that which uses survey data gathered at one-year intervals, because the effects tend to dissipate over time (see Headey et al., 1991; Lyubomirsky, et al., 2006). The effect of leisure consumption on well-being might be particularly subject to this dissipation. Unlike the consumption of cars and houses, for example, which can replicate enjoyable experiences and positive affect every time consumers use these products, leisure consumption produces a hedonic experience that can only be consumed immediately. Therefore, leisure consumption temporarily influences consumers' short-lived affect rather than their enduring well-being. Yet regular, habitual leisure consumption might enable consumers to repeat the related hedonic experiences and positive affect, which can lead to a sense of well-being derived from small and frequent positive pleasures (Lyubomirsky, Sheldon, et al., 2005; Lyubomirsky et al., 2008). This consideration clearly influences the BHPS measure of leisure consumption as consumers' average monthly consumption on leisure in a year. The measure of SWB in BHPS, as we noted previously, consists of consumers' recent positive and negative affect in the same year. Therefore, we believe it is more reasonable to address the effect of regular leisure consumption on the same year's well-being rather than the next year's well-being, especially in this research, because

our data come from every other year in BHPS; it is unlikely that the causal effects of leisure consumption persist over two years. We thus estimate causality with independent, mediating, and dependent variables measured contemporaneously. Stata 10 supports the data analysis.

### **Model Specification and Estimation**

We estimate fixed-effects econometric models of the mediating effect of satisfaction with the relevant life domains on the relationship between hedonic product consumption and well-being, as well as the effect of the frequency of consumption of hedonic products on satisfaction with the relevant life domains. Panel fixed-effects analysis enables us to filter out unobserved individual characteristics, such as personality or disposition, which do not change over time but correlate systematically with SWB, as well as with factors associated with the well-being function (e.g., consumption, satisfaction with life domains). This method should remove bias caused by these factors and improve the coefficient estimates from the cross-sectional analysis; it also should help establish causal directions (Graham et al., 2004). In our fixed-effects model in which satisfaction with the relevant life domains mediates the effect of hedonic product consumption on well-being, we include three sets of predictors: consumption of hedonic products, satisfaction with relevant life domains, and other control variables. Therefore, the fixed-effects equation is:

$$W_{it} = \alpha + \beta C_{it} + \delta M_{it} + \gamma X_{it} + \mu_i + \varepsilon_{it}, \quad (1)$$

where  $C_{it}$  denotes person  $i$ 's leisure consumption at time  $t$ ,  $M_{it}$  is a vector of mediators,  $X_{it}$  is a vector of control variables,  $\mu_i$  is unobservable individual characteristics that affect consumption (e.g., personality), and  $\varepsilon_{it}$  is the random error.

The fixed-effects equation with the frequency of consumption of hedonic products as a

critical determinant of satisfaction with the relevant life domains contains two sets of predictors:

$$S_{it} = \alpha + \beta F_{it} + \gamma X_{it} + \mu_i + \varepsilon_{it}, \quad (2)$$

where  $F_{it}$  is person  $i$ 's frequency of engaging in leisure activities at time  $t$ , and  $X_{it}$  is a vector of control variables, which include leisure consumption and other control variables.

## RESULTS

In Table 1, we present the means, standard deviations, and pairwise correlations among the independent and dependent variables and mediators. The average SWB score is greater than 10, which indicates that most people are happy.<sup>2</sup> The average leisure consumption score is 3–4 (£20–39 per month). The average frequency of engaging in various leisure activities is 9. The signs of the correlations all are in the expected direction.

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Insert Table 1 Here

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The effects of leisure consumption on well-being, according to a series of nested panel fixed-effects estimations, appear in Table 2. Model (1) presents the results of a regression that includes only the control variables, all of which move in the expected directions. Compared with those who are self-employed, people who are employed achieve higher well-being levels, whereas those who are unemployed or claim another job status are less happy. Those with preschool children are not as happy as others, and people whose spouses are employed are happier than those whose spouses are not. As expected, compared with those who are married,

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<sup>2</sup> A well-being score of 10 or more is considered high (Clark, 2003).

people who are not married any more are less happy, whereas being single does not affect happiness. Other controls, such as age, academic qualifications, household size, and house ownership, do not have significant effects on well-being. We drop gender from the analysis due to collinearity.

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Insert Table 2 Here  
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In H1, we argue that hedonic product consumption leads to increased SWB. The results in Model (2), which includes leisure consumption, show that the coefficient of leisure consumption is positive and statistically significant. Holding all other variables constant, the total effect of leisure consumption on well-being is 0.0272 ( $p > |t| = .0000$ ). That is, the marginal effect of well-being increases by 0.0272 units (average increase = 0.1632) when leisure consumption increases by 1 unit. Therefore, our empirical results support H1.

Turning to our mediation hypothesis, in which we argue that consumption of hedonic products affects well-being through the mediating role of satisfaction with the life domains associated with the consumption, we again find support for our theory. In the context of leisure consumption, for which we assume the relevant spillover life domains are social life, health, and leisure life, we regress satisfaction on social life, use of leisure time, and health separately; the results of the fixed-effects regressions appear in Models (3a), (3b), and (3c), respectively. As we expected, leisure consumption is statistically significant in all three models, which suggests that the variables are primary drivers of the mediation. When we regress the full mediation model, with both leisure consumption and satisfaction with the

relevant life domains, we derive Model (4). Adding satisfaction with the relevant life domains causes the coefficient of leisure consumption to become insignificant. Our results therefore completely meet the mediation requirements established by Baron and Kenny (1986). Specifically, the total effect of leisure consumption on well-being is significant in the absence of satisfaction with life domains (Model 2). The regressions of satisfaction with the use of leisure time, social life, and health on leisure consumption all yield statistically significant coefficients (Models 3a–c). Satisfaction with these relevant life domains also is statistically significant when we hold leisure consumption constant (Model 4). Finally, leisure consumption becomes insignificant when we add satisfaction with the relevant life domains to the equation (Model 4). Therefore, satisfaction with the use of leisure time, satisfaction with social life, and satisfaction with health completely mediate the relationship between leisure consumption and well-being, in support of H2.

In H3, we posit that satisfaction with the life domains positively correlates with a high frequency of consumption of hedonic products. To test this theory in the context of leisure consumption, we regress satisfaction on social life, use of leisure time, and health on the frequency of engaging in various leisure activities, holding leisure consumption constant. The results of the fixed-effects regression in Models (5a), (5b), and (5c) (see Table 2) show that the coefficients of frequency of engaging in various leisure activities are highly significant. Specifically, when we hold leisure consumption constant, the effects of the frequency variable on satisfaction with social life, the use of leisure time, and health are 0.0427 ( $p > |t| = .0000$ ), 0.0503 ( $p > |t| = .0000$ ), and 0.0266 ( $p > |t| = .0000$ ), respectively. That is, controlling for leisure consumption, the marginal effects of satisfaction with social life, use of leisure time,

and health increase by 0.0427 (average = 0.1495), 0.0503 (average = 0.1761), and 0.0266 (average = 0.0931) units, respectively, when the frequency of engaging in leisure activities increases by 1 unit. Therefore, H3 receives support, and our results further seem to indicate that the frequent consumption of low-cost leisure activities has significant positive effects on satisfaction with these life domains.

## DISCUSSION

Our results supplement literature on happiness-enhancing activities, such as practicing optimism, gratitude, and acts of kindness (e.g., Lyubomirsky & Dickerhoof, in press; Lyubomirsky et al., 2008), by showing practicing consumption also helps. The findings help resolve understand the role of consumption in promoting happiness by demonstrating that (1) consumption only contributes to well-being if it serves to improve the quality of the relevant life domains associated with that consumption; (2) consumers' subjective cognition (e.g., being satisfied with what they have) plays a crucial role; and (3) the frequent consumption of (low-cost) hedonic products, rather than the infrequent consumption of (high-cost) products, relates positively to consumers' subjective satisfaction with the relevant life domains. Third, consumer psychology researchers mainly focus on short-lived emotions (Havlena & Holbrook, 1986; Luce, Bettman, & Payne, 2001). Our study extends this into consumptions effect on long-lived emotional state and well-being. Fourth, our research empirically verifies in the consumption context that the relationship between consumption behavior and well-being depends on both objective consumption behavior and consumers' subjective interpretations. Finally, as most research on happiness-enhancing activities uses unrepresentative or small student samples (e.g., Lyubomirsky et al., 2008; Seligman, Rashid, & Parks, 2006), by

employing a large, nationally representative sample, we demonstrate the generalizability of happiness-increasing activities and our use of longitudinal panel data enables us to cancel out the unobserved individual characteristics (e.g., personality differences) and remove the upward bias caused by these factors.

## CONCLUSIONS AND RESEARCH LIMITATIONS

This paper posed three main research questions. First, Does spending money on hedonic products increase well being? 2. Why might spending on hedonic product increase consumers' well-being? 3. How much should consumers spend on hedonic products to increase their well-being?).

We note several limitations to our study. First, we consider only monthly, overall consumption of six leisure activities but do not analyze if each activity contributes differently to well-being. Second, we examined leisure consumption as being indicative of the consumption of hedonic products, but our results may not generalize to other forms of hedonic consumption. Given the complicated relationship between a consumer's well-being and consumption, it is necessary to incorporate the notion of fit between individual characteristics (e.g., a consumer's resources, ability), the characteristics of specific demand (e.g., enjoying watching TV programs, needing a very relaxing holiday), and the characteristics of different consumption experiences (e.g., can be used for a long time or one time) (Yoon, Cole, & Lee, 2009). Consumers need to adapt their consumption behavior in order to maximize the fit to increase their well-being. For example, household electronics and cars can be possessed and consumed for a long time and a consumer who is particularly connected with these products on an emotional level rather than for ego enhancement and showing off, can gain repeated pleasure again and again from the

luxury choice (e.g., a big screen television, a Lamborghini) (Hagtvedt & Patrick, 2009). In such cases, even less frequent consumption on luxury hedonic household electronics or, cars, and vacations may lead to well-being. Therefore, further research should empirically examine these product categories. Third, our results show that hedonic product consumption is not the essence of well-being but only improve quality and satisfaction with the relevant life domains, which lead to well-being. So does a similar relationship exist for utilitarian product consumption that also serves to improve the quality of relevant life domains and thus may improve consumers' satisfaction with those life domains? Research should investigate alternative consumption categories. Finally, consumers might under- or overestimate how much they spend on leisure each month. Unfortunately, no "correction factor" exists for us to adjust for this potential error. Further research might pursue diary methods to measure consumption variables more accurately and collect satisfaction and well-being data pertaining to shorter intervals.

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